

AMENDMENT(S) TO THE CLAIMS

1. (currently amended) A process of treating a fiber stock suspension ~~for to produce~~ at least one of paper and cardboard ~~production~~ having filled fibers therein, said process comprising the steps of:

providing the fiber stock suspension, with a moistened fiber material having fiber
5 surfaces, said stock suspension having a stock pH associated therewith, said stock pH being set in an approximate range of 10 to 13;

adding at least one additive to the fiber suspension, including at least CaCO_3 ;

treating the fiber suspension and the at least one additive together in a fluffer operated under fiber stock fluffing conditions;

10 separating the fiber material within said fluffer so as to increase a specific surface thereof, thereby optimizing accessibility of educts to the fiber surfaces;

filling fibers within the fiber stock suspension with said additive to form filled fibers; and

passing the treated fiber stock suspension to a paper machine and ~~producing~~ forming the at least one of paper and cardboard with the treated fiber stock suspension.

2. (previously presented) The process of claim 1, wherein one said additive is a filler incorporated onto the fiber surfaces during said separating step.

3. (original) The process of claim 1, wherein said fluffer separates the fiber material into individual fibers.

4. (currently amended) The process of claim 1, wherein said fluffer is used for pre-treating the fiber stock suspension prior to said step of adding at least one additive to the fiber suspension.

5. (currently amended) ~~The A~~ process of ~~claim 1~~, treating a fiber stock suspension for at least one of paper and cardboard production, said process comprising the steps of:

providing the fiber stock suspension, with a moistened fiber material having fiber surfaces, said stock suspension having a stock pH associated therewith, said stock pH being set in
5 an approximate range of 10 to 13;

adding at least one additive to the fiber suspension, including at least CaCO_3 ;

treating the fiber suspension and the at least one additive together in a fluffer operated under fiber stock fluffing conditions;

separating the fiber material within said fluffer so as to increase a specific surface thereof,
10 thereby optimizing accessibility of educts to the fiber surfaces;

passing the treated fiber stock suspension to a paper machine and producing the at least one of paper and cardboard with the treated fiber stock suspension; and

wherein said fluffer is comprised of at least one of knives and toothed fluffer disks.

6. (original) The process of claim 1, wherein the fluffer has a working area which is pressurized.

7. (original) The process of claim 6, wherein a pressure in said working area is within an approximate range of 0.1 to 20 bar.

8. (original) The process of claim 1, wherein said process has a volume and mass flow rate associated therewith, said volume and mass flow rate being adjustable within an approximate range of 5 tons/day to 1500 tons/day.

9. (original) The process of claim 1, wherein said fiber stock suspension within said fluffer has a stock temperature, the stock temperature being capable of being regulated within an approximate range of 5° C to 250° C.

10. (original) The process of claim 1, wherein the at least one additive is added to the fiber stock suspension at an approximate ratio of 15% to 40%.

11. (original) The process of claim 10, wherein the at least one additive is added to the fiber stock suspension at an approximate ratio of 20% to 25%.

12. (cancelled).

13. (previously presented) The process of claim 1, said CaCO_3 being added to the fiber stock suspension at least one of prior to, in and after said fluffer.

14. (original) The process of claim 13, wherein said CaCO_3 has temperature selected to be in an approximate range of -10° C to 250° C.

15. (currently amended) The A process of claim 1, treating a fiber stock suspension for at least one of paper and cardboard production, said process comprising the steps of:

providing the fiber stock suspension, with a moistened fiber material having fiber surfaces, said stock suspension having a stock pH associated therewith, said stock pH being set in an approximate range of 10 to 13;

adding at least one additive to the fiber suspension, including at least CaCO_3 ;

treating the fiber suspension and the at least one additive together in a fluffer operated under fiber stock fluffing conditions;

separating the fiber material within said fluffer so as to increase a specific surface thereof,

thereby optimizing accessibility of educts to the fiber surfaces;

passing the treated fiber stock suspension to a paper machine and producing the at least one of paper and cardboard with the treated fiber stock suspension; and

wherein one said step of adding at least one additive includes adding $\text{Ca}(\text{OH})_2$, said $\text{Ca}(\text{OH})_2$ being added to the fiber stock suspension at least one of prior to, in and after said fluffer.

16. (original) The process of claim 15, wherein said $\text{Ca}(\text{OH})_2$ is added at an approximate ratio of 1% to 60%.

17. (original) The process of claim 15, wherein said $\text{Ca}(\text{OH})_2$ has a particle surface of greater than $30,000 \text{ cm}^2/\text{g}$.

18. (original) The process of claim 5, wherein said fluffer includes at least one pair of adjoining fluffer disks, each pair of adjoining fluffer disks defining a nip, each nip having a nip width, said nip width being adjustable within a range of about 0.1 mm to about 100 mm.

19. (original) The process of claim 1, wherein said process has an energy requirement associated therewith, said energy requirement being selected from an approximate range of 5 kWh/t to 200kWh/t.

20.-32. (cancelled)